

REMARKS

By this Amendment, Applicants add new claims 40-44. Claims 2-6, 8-17, and 19-44 are therefore pending in this application, with claim 20 being the sole independent claim. In the final Office Action of February 23, 2006 ("Office Action"),¹ claims 2-6, 8-17, 19-32, 38 and 39 were rejected under 35 U.S.C. § 103(a) as unpatentable over JP 2001104050 ("*Nagaishi*") in view of U.S. Patent Application Publication No. 2001/0037191 ("*Furuta*"); and claims 33-37 were rejected under 35 U.S.C. § 103(a) as unpatentable over *Nagaishi* in view of *Furuta* and further in view of U.S. Patent No. 6,504,546 B1 ("*Cosatto*"). Applicants address these rejections, as well as the new claims, below.

Section 103(a) rejection based on *Nagaishi* and *Furuta*

Applicants traverse the rejection of claims 2-6, 8-17, 19-32, 38 and 39 because a case for *prima facie* obviousness has not been established. As M.P.E.P. § 2142 states, "[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness." To establish *prima facie* obviousness under 35 U.S.C. § 103(a), three requirements must be met. First, the applied references, taken alone or in combination, must teach or suggest each and every element recited in the claims. See M.P.E.P. § 2143.03 (8th ed. 2001). Second, there must be some suggestion or motivation, either in the reference(s) or in the knowledge generally available to one of ordinary skill in the art, to combine or modify the reference(s) in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of these requirements must "be found in the prior art, and not be based on applicant's disclosure."

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether or not any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

M.P.E.P. § 2143 (8th ed. 2001). In this case, the requirements for *prima facie* obviousness are lacking, as discussed below.

Independent claim 20 recites a combination including “analyzing the at least one external body condition via the three-dimensional image” and “proposing to the subject an aesthetic feature for affecting the at least one external body condition based, at least in part, on the analyzing of the external body condition.” *Nagaishi* fails to disclose or suggest at least these features.

Nagaishi is directed to a “[c]osmetics selection assistance procedure.” *See* title. *Nagaishi* discloses analyzing an “extracted facial image photographed by a camera” to obtain “the condition of the skin.” Abstract. Using the skin condition information, *Nagaishi*’s system outputs to a user “advice regarding makeup.” *Id.*

Although *Nagaishi* discloses analyzing a facial image and providing makeup advice, the reference does not teach or suggest at least “proposing to the subject an aesthetic feature for affecting the at least one external body condition based, at least in part, on the analyzing of the external body condition [via the three-dimensional image],” as recited in claim 20. *Nagaishi*’s system analyzes an “extracted facial image photographed by a camera” to provide advice to users. Abstract. Providing makeup advice based on an analysis of a photographed image, as disclosed by *Nagaishi*, does not constitute “proposing to the subject an aesthetic feature for affecting the at least one external body condition based, at least in part, on the analyzing of the external body condition [via the three-dimensional image]” as recited in claim 20 (emphasis added). Indeed, *Nagaishi* does not disclose using “a three-dimensional facial image,” as affirmed by the Examiner, let alone proposing an aesthetic feature based, at least in part, on an analysis of an external body condition via a three-dimensional image.

Furuta fails to cure *Nagaishi*'s deficiencies. *Furuta* is directed to providing a beauty simulation (Abstract). *Furuta* discloses generating "3D face model data" using captured images of a user (Abstract; ¶ 0032; FIG. 3). As the Examiner noted, *Furuta* also discloses performing "simulations of makeup, cosmetic surgery, clothing, perfume, accessories, hair style, etc. . . . based on 3D information." See Office Action at 4; *Furuta*, ¶ 0041. One of *Furuta*'s simulations involves analyzing light and dark areas of facial skin to evaluate "beauty and apparent age" and comparing an "evaluation facial image before and after face lift surgery" (*Furuta*, ¶¶ 0043-47).

Performing simulations on a 3D model, as disclosed by *Furuta*, does not constitute "proposing to the subject an aesthetic feature for affecting the at least one external body condition based, at least in part, on the analyzing of the external body condition" as recited in claim 20. Further, analyzing light and dark regions using an image to evaluate beauty and age, as disclosed by *Furuta*, does not teach or suggest the "proposing" feature of claim 20. Even if "beauty and age" were construed as an "external body condition," *Furuta* does not disclose proposing an aesthetic feature for affecting the condition based on the analysis of the light and dark regions of the facial skin. *Furuta*'s system merely creates an "evaluation facial image comprising a plurality of areas having different levels of brightness" and facilitates a "simulation for plastic surgery or makeup styles" (¶ 0046-0048). For at least these reasons, *Furuta* does not teach or suggest at least the "proposing" feature of claim 1 and therefore fails to cure *Nagaishi*'s deficiencies.

In the Office Action, the Examiner averred that *Nagaishi* "does not explicitly disclose using a three-dimensional facial image however *Furuta* is relied upon for this" (page 2). Applicants respectfully submit that the Examiner has apparently misconstrued *Furuta*. While mentioning a 3D image, *Furuta* does not disclose "using" the image in the manner recited in

claim 20, as alleged by the Examiner. Office Action, p. 2. Indeed, as discussed above, *Furuta* does not teach or suggest “proposing to the subject an aesthetic feature for affecting the at least one external body condition based, at least in part, on the analyzing of the external body condition [via the three-dimensional image],” as recited in claim 20.

Furthermore, Applicants note that “[i]n determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.” M.P.E.P. § 2141.02. In this case, even if “proposing . . . an aesthetic feature” and a “three-dimensional facial image” were individually known, the Office Action has not established that claim 20, taken as a whole, including the “proposing” feature, would have been obvious in view of the applied references.

Neither *Nagaishi* nor *Furuta*, nor any combination thereof, teaches or suggests each and every feature of claim 20. Consequently, a case for *prima facie* obviousness has thus not been established.

Additionally, the requisite motivation for modifying *Nagaishi* in view of *Furuta* is lacking. According to the Federal Circuit, “virtually all [inventions] are combinations of old elements.” *See e.g., In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998) (citations omitted). An examiner may find every element of a claimed invention in the prior art but mere identification is not sufficient to negate patentability. *Id.* The court explained that “the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.” *Id.*

Furthermore, determinations of obviousness must be supported by evidence on the record. *See In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001), 59 USPQ2d 1693, 1696-98 (finding that the factual determinations central to the issue of patentability, including conclusions of obviousness by the Board, must be supported by “substantial evidence”). The desire to combine or modify references must be proved with “substantial evidence” that is a result of a “thorough and searching” factual inquiry. *See In re Lee*, 277 F.3d 1338, 1343-1344 (Fed. Cir. 2002), 61 USPQ2d 1430, 1433 (quoting *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52). Additionally, the Federal Circuit has clearly stated that the evidence of a motivation or suggestion to modify a reference must be “clear and particular.” *In re Dembicziak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

In this case, the Examiner has not shown by “clear and particular” evidence that a skilled artisan considering *Nagaishi* and *Furuta*, and not having the benefit of Applicants’ disclosure, would have modified or combined the references in a manner resulting in the invention defined by claim 20. The Examiner alleged that a skilled artisan would have modified *Nagaishi* in view of *Furuta* “to provide more realistic beauty simulations.” Office Action at 4-5. The Examiner further alleged that “it is well known . . . that a three-dimensional figure is more realistic and thus would give better simulations thus enhancing the sales of the products.” *Id.*, p. 2-3.

These allegations in the Office Action are not supported and do not show that a skilled artisan would have modified *Nagaishi* as alleged. The Office Action provides no reasoning or evidence showing that a skilled artisan considering *Nagaishi*’s system would have been concerned with “providing more realistic beauty simulations.” From what Applicants can discern, *Nagaishi*’s system does not even provide simulations. Instead, the system merely provides makeup advice. Further, that the supposed modification might potentially result in

“realistic beauty simulations” does not suffice as clear and particular evidence that a skilled artisan would have performed that modification. Regardless of whether “a three-dimensional figure is more realistic,” the Office Action has provided no reasoning showing why a skilled artisan would modify *Nagaishi*’s system as alleged. For example, the Office Action has not established that providing realistic simulations would benefit *Nagaishi*’s system in any fashion. Further, nothing supports the Examiner’s attempt to equate a three-dimensional figure with enhancing sales of products.

As M.P.E.P. § 2143.01 makes clear, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination” (citations omitted). In this case, the Examiner has not shown that *Nagaishi* or *Furuta* “suggests the desirability” of the alleged modification.

Applicants submit that the Examiner is impermissibly using teachings of the present application in hindsight to piece together isolated disclosures of the cited references. Examiners, however, may not pick and choose among isolated disclosures in references to defeat patentability of a claimed invention. Such picking and choosing amounts to improper hindsight reconstruction, and is prohibited. *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988).

For at least these additional reasons, *prima facie* obviousness has not been established with respect to claim 20. The rejection of claim 20 under 35 U.S.C. § 103(a) should therefore be withdrawn. The § 103(a) rejection of dependent claims 2-6, 8-17, 19, 21-32, 38, and 39 should be withdrawn as well, for at least the same reasons as those presented above in connection with base claim 20.

Further, with respect to claims 28, 30, and 31, *prima facie* obviousness has not been established at least because the cited art fails to teach or suggest that “facilitating construction of a three-dimensional facial image using at least one captured image of a subject’s face comprises applying the at least one captured image in a virtual manner on a three-dimensional frame,” as recited in claim 28 and required by claims 30 and 31. The Examiner affirmed that *Nagaishi* fails to disclose these features but alleged that *Furuta* cures the deficiencies. Office Action at 7. In particular, the Examiner alleged that “*Furuta* discloses applying a simulation of the three-dimensional data and displaying it thus it must be on a three-dimensional frame (paragraph 9 and paragraph 38)” *Id.* Applicants disagree with the Examiner’s interpretation of *Furuta*.

Although *Furuta* discloses displaying “a three-dimensional image . . . in the display apparatus,” the reference is silent with regard to “applying the at least one captured image in a virtual manner on a three-dimensional frame.” The Examiner’s conclusion that *Furuta*’s three-dimensional data “must be on a three-dimensional frame” because it is simulated and displayed is completely conjectural, lacking any support by evidence on the record. Indeed, *Furuta* fails to disclose “applying the at least one captured image in a virtual manner on a three-dimensional frame,” as recited in claim 28, let alone generating the three-dimensional frame “based on stored information” or “based on inputted information,” as recited in claims 30 and 31, respectively.

In the Office Action, the Examiner alleged that *Furuta* “discloses a three-dimensional image, and a three-dimensional image must inherently have a three-dimensional frame.” Office Action at 3. This allegation does not establish that *Furuta* discloses “applying the at least one captured image in a virtual manner on a three-dimensional frame,” as recited in claim 28, let alone generating the three-dimensional frame “based on stored information” or “based on inputted information,” as recited in claims 30 and 31, respectively.

The Examiner appears to have relied upon principles of inherency in applying *Furuta* to claims 28, 30, and 31. *See* Office Action at 3. Applicants submit that the Examiner has not established inherency. As M.P.E.P. § 2112 makes clear:

To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’ (internal citations omitted).

In addition, M.P.E.P. § 2112 states:

[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. (internal citations omitted).

In this case, the Office Action failed to provide sufficient evidence from *Furuta*, or any recourse to extrinsic evidence, making clear that the features of claims 28, 30, or 31 are necessarily present in the reference. The Office Action also failed to present sufficient factual basis and technical reasoning to demonstrate inherency. The various portions of *Furuta* noted by the Examiner do not evidence that the features of Applicants claims are necessarily present in *Furuta*. Likewise, the conjectural statements by the Examiner that certain features are inherent do not evidence that the features of Applicants claims are necessarily present in *Furuta*. Consequently, the Examiner cannot properly infer that the subject matter of claims 28, 30, or 31 is inherently disclosed by *Furuta*.

For at least the foregoing additional reasons, § 103(a) rejection of claims 28, 30, and 31 should be withdrawn.

Claim 29 depends upon claim 28. The § 103(a) rejection of claim 29 should be withdrawn for at least the additional reasons presented above in connection with claim 28.

Moreover, claim 29 recites, *inter alia*, “applying the at least one captured image in a virtual manner on a three-dimensional frame that is in the form of a virtual wire mesh.” The Examiner conceded that the cited art fails to disclose this feature but alleged that the feature would have been obvious. Office Action at 7. Applicants disagree with the Examiner’s analysis, as discussed below.

The Office Action alleged that “Applicant has not disclosed that using a virtual mesh provides an advantage, is used for a particular purpose or solves a stated problem” and that a skilled artisan “would have expected Applicant’s invention to perform equally well with the method of *Furuta* for constructing the three-dimensional facial image.” Office Action at 7. These allegations in the Office Action do not establish that the features of claim 29 would have been obvious or that a skilled artisan would have modified the cited art in a manner resulting in the claimed invention. In fact, the Office Action appears to insinuate that Applicants’ claimed invention could be modified to accommodate *Furuta*’s “method . . . for constructing the three-dimensional facial image.” *See id.*

In alleging that an advantage or purpose has not been shown, the Examiner is improperly attempting to shift the burden of establishing a *prima facie* case of unpatentability. As M.P.E.P. § 2142 makes clear, “[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness [and] . . . [i]f the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.” Here, the Office Action failed to meet the burden of showing *prima facie* obviousness. As such, the § 103 rejection should be withdrawn regardless of whether Applicants show that the subject matter of claim 29 “provides an advantage, is used for a particular purpose or solves a stated problem.”

Office Action at 7. For at least these additional reasons, § 103(a) rejection of claim 29 should be withdrawn.

Applicants request withdrawal of the § 103(a) rejection and the timely allowance of claims 2-6, 8-17, 19-32, 38 and 39.

Applicants note that these additional arguments set forth above with respect to claims 29 were presented in Applicants' Amendment filed December 12, 2005. The final Office Action, however, failed to address all of these arguments. For at least this reason, the finality of the outstanding Office Action is improper. Should the Examiner continue to dispute the patentability of the claims, Applicants request a new non-final Office Action that addresses all of Applicants' arguments.

Section 103(a) rejection of claim 33-37 based on *Nagaishi*, *Furuta*, and *Cosatto*

Applicants traverse the § 103(a) rejection of claims 33-37 because a case for *prima facie* obviousness has not been established, as discussed below.

Each of claims 33-37 depends upon claim 20 and therefore requires the "proposing" feature of claim 20. As explained above, neither *Nagaishi* nor *Furuta* teaches or suggests at least that "proposing" feature. Moreover, *Cosatto* does not cure the deficiencies of *Nagaishi* and *Furuta*. *Cosatto* is directed to "modeling three-dimensional objects to create photo-realistic animations using a data-driven approach." Abstract. Although *Cosatto* describes three-dimensional objects, the references does not teach or suggest at least "proposing to the subject an aesthetic feature for affecting the at least one external body condition based, at least in part, on the analyzing of the external body condition," as recited in claim 20 and required by claims 33-37. Accordingly, neither *Nagaishi*, *Furuta*, nor *Cosatto*, nor any combination thereof, teaches or suggests each and every feature of claims 33-37. As such, *prima facie* obviousness has not been established and the § 103(a) rejection of claims 33-37 should be withdrawn.

Additionally, with regard to claim 37, the cited art fails to teach or suggest “allowing the subject to compare a displayed color of the three-dimensional facial image with an actual color of an actual body region to color-calibrate the three-dimensional facial image,” as claimed. As affirmed by the Examiner, neither *Nagaishi* nor *Furuta* teaches or suggests this “allowing” feature. See Office Action at 8-9. Further, contrary to the Examiner’s position, *Cosatto* fails to cure the deficiencies of *Nagaishi* and *Cosatto*. Although *Cosatto* describes “color calibration” and “[tracking] changes in the appearances of the facial features” (col. 8, lines 15-41), the reference does not teach or suggest “allowing the subject to compare a displayed color of the three-dimensional facial image with an actual color of an actual body region to color-calibrate the three-dimensional facial image.” *Cosatto*’s system uses an automated algorithm that analyzes “the color space, periodically retraining the space with a small number of frames” and assigns colors “to the different parts” (col. 8, lines 15-41). *Cosatto* is silent with respect to “allowing the subject to compare a displayed color of the three-dimensional facial image with an actual color of an actual body region to color-calibrate . . .,” as claimed. For these additional reasons, *prima facie* obviousness has not been established with regard to claim 37 and the § 103(a) rejection of that claim should be withdrawn.

In addition, *prima facie* obviousness has not been established with respect to claims 33-37 because the required motivation for combining *Nagaishi*, *Furuta*, and *Cosatto* is lacking. The Examiner has not shown that a skilled artisan considering the cited references and not having the benefit of Applicants’ disclosure, would have been motivated to combine or modify the references in a manner resulting in Applicants’ claimed combination. The Office Action alleged that a skilled artisan would have combined the references because “changes in the appearances of the facial features can be tracked.” Office Action at 9. That allegation in the

Office Action is not properly supported by evidence and does not show that a skilled artisan would have modified the references as alleged.

Again, Applicants call attention to M.P.E.P. § 2143.01, which makes clear that: “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination” (citations omitted). The Office Action does not show that the cited art “suggests the desirability” of the alleged combination. Although *Furuta* discloses that “changes in the appearances of the facial features can be tracked” by “repeating the color-calibration periodically,” the Office Action fails to provide any evidence or explanation as to how *Furuta*’s “color-calibration” would be used in the system of *Nagaishi* or *Furuta* to achieve the alleged result. Further, the Examiner has provided no reasoning showing why a skilled artisan would modify or combine the references to track “changes in the appearances of the facial features.” Simply reiterating an effect or use of *Furuta*’s “color-calibration” mentioned in the reference does not establish that a skilled artisan, without any knowledge of Applicants’ claimed invention, would select the various features of the cited references for combination in the manner claimed. Indeed, the allegation in the Office Action does not suffice as clear and particular evidence that a skilled artisan would have combined the references in the manner claimed. Applicants submit that the Examiner is again impermissibly using teachings of the present application in hindsight to piece together isolated disclosures of the cited references.

For at least these additional reasons, *prima facie* obviousness has not been established with respect to claims 33-37. The § 103(a) rejection of these claims should therefore be withdrawn. Applicants request withdrawal of the § 103(a) rejection and the timely allowance of claims 33-37.

Applicants note that these arguments set forth above with respect to claims 33-37 were presented in Applicants' Amendment filed December 12, 2005. The final Office Action, however, failed to address all of these arguments. For at least this reason, the finality of the outstanding Office Action is improper. Should the Examiner continue to dispute the patentability of the claims, Applicants request a new non-final Office Action that addresses all of Applicants' arguments.

New claims 40-44

New claims 40-44 depend upon claim 20 and are distinguishable from the applied references for at least the reasons discussed above in connection with claim 20. Furthermore, the applied references, taken alone or in combination, fail to teach or suggest additional features recited in new claims 40-44. Applicants therefore request the timely allowance of new claims 40-44.

Conclusion

Applicants request the Examiner's reconsideration of the application in view of the foregoing, and the timely allowance of pending claims 2-6, 8-17, and 19-44.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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